



DEPARTMENT OF HEALTH AND HUMAN SERVICES  
CENTERS FOR DISEASE CONTROL AND PREVENTION



# CDC's VERB Campaign to Increase Physical Activity among Children 9-13

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NCHM Conference

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*The findings and conclusions presented here are those of the author and do not necessarily represent those of Centers for Disease Control and Prevention. (CS112178)*



# Outline

- Scope of the VERB campaign
- Theories and evidence that guided the campaign
- Results
- Challenges and lessons
- Application to smaller marketing efforts



VERB used marketing to influence children 9 – 13 to be physically active every day with mass media advertising, school and community promotions, Internet, and partnerships.

# Overview

- 2002 - 2006
- Targeted all US tweens
- Brand strategy
- Individual level focus
- Parents were secondary audience
- Well-funded \$339M



# Theory

## Grounded in Theory

- Theory
- Logic model for VERB<sup>1</sup>
  - Linked intervention → attitudes, beliefs → behavior
  - Measures matched logic model boxes
  - Short-term, intermediate-term, long-term outcomes
- Is a roadmap itself; increases credibility of evaluation

<sup>1</sup> Huhman M, Heitzler C, Wong F. The VERB campaign logic model: a tool for planning and evaluation. *Preventing Chronic Disease* [serial online]. July 2004. Available at: <http://www.cdc.gov/pcd/issues/2004/jul/toc.htm>

- More on theory and science
  - Social cognitive theory
  - Theory of Planned behavior
  - Elaboration Likelihood Model
  - McGuire Hierarchy of Effects

# VERB Evaluation Overview

- Quasi-experimental
- Cohort design, nationally representative samples of tweens and parents
- Data collected prior to campaign launch (2002) and each subsequent year (2003 – 2006)
- Analyzed for annual effects and trends after adjusting for confounders

# VERB Evaluation Strategies Review

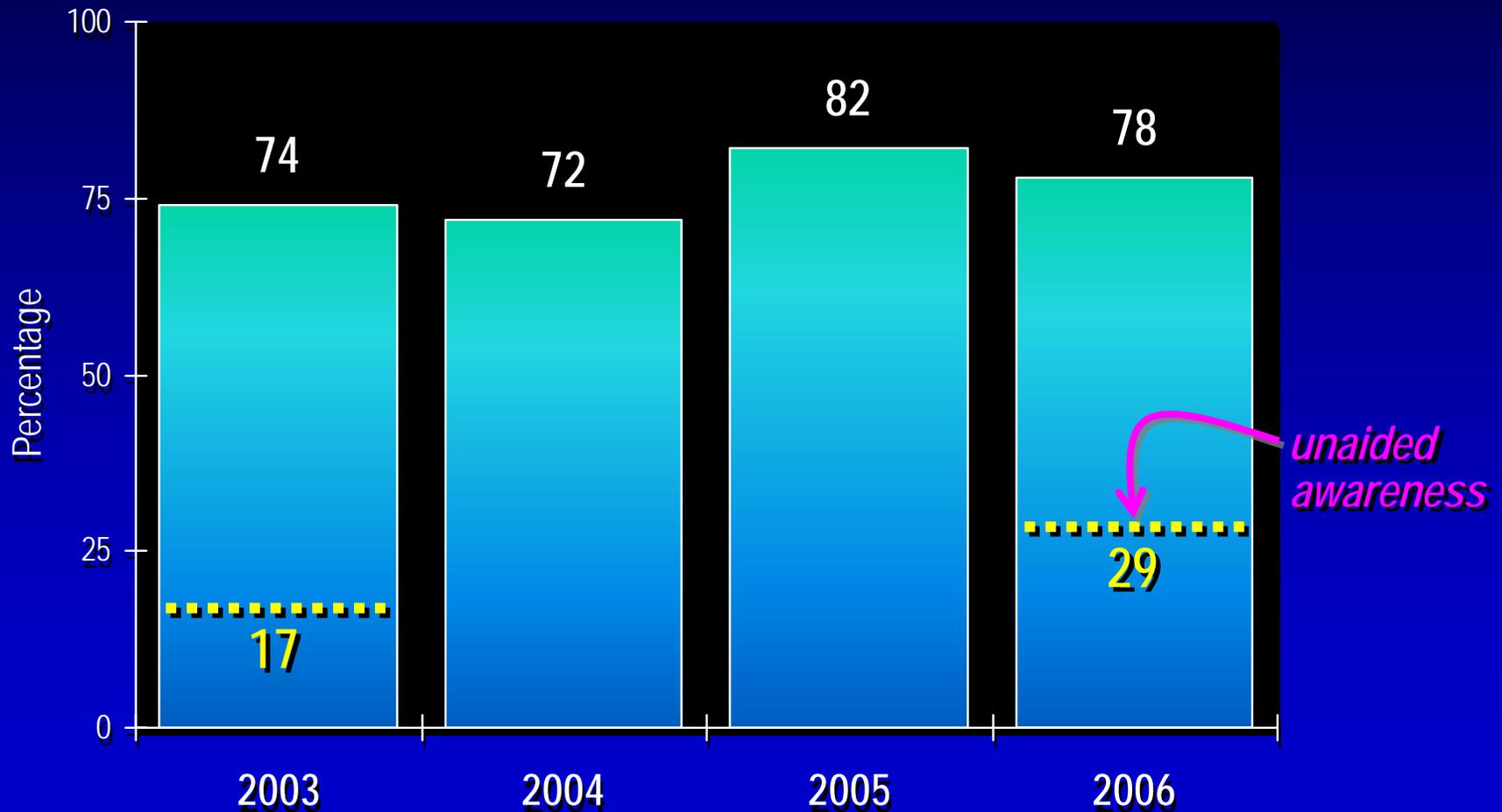
- Basics: Theory guided logic model, message content, measurement
- Formative evaluation guided message development
- Process evaluation: Determined fidelity of the intervention
- Outcome evaluation: Quasi-experimental, but rigorous, attribution of effect (?)

# Analytic Method Propensity Scoring

- Observational studies when have many variables
- Uses predictive modeling and weighting
- Baseline measures used to control for confounders at follow-up
- Associations between exposure to VERB and outcomes are practically free of the confounding effects of measured covariates

# Results

## Tween's Awareness of VERB



# Understanding of VERB

In each year studied, more than 90% of tweens aware of VERB could report at least one of the key messages of the campaign.

# VERB Campaign Outcome Results

- Year 1 (2003): effects on behavioral outcomes were detected for population subgroups--girls and younger tweens
- Year 2 (2004): positive effects were detected on 6 of 7 outcomes for the entire target population

# Results year 2 (continued)

- 6 outcomes positively affected by VERB:
  - Sessions of free-time activity in past 7 days
  - Percent physically active on day prior to survey
  - Total physical activity sessions in past 7 days
  - Expected benefits of being physically active
  - Social norms about physical activity
  - Social influences on physical activity

# Results (*continued*)

- Sessions of free-time activity in past 7 days
  - Aware children did 3.9 sessions; 3.0 sessions for unaware
  - Effect size\*:  $r = 0.07$

\*Effect size in other campaigns averaged .09; among persuasion campaigns, averaged .05.<sup>2</sup>

Effect size = correlation that indicates the robustness of your findings.

<sup>2</sup> Snyder L, Hamilton M. A meta-analysis of US health campaign effects on behavior. [Public health communication](#). 2002

# Results (continued)

- Previous day physical activity
  - 61% of children aware of VERB were physically active on the previous day, compared to 46% of unaware children
  - Effect size:  $r = 0.12$

# Challenges

- What are the other explanations for your results?
  - Measurement
  - Confounder control
- Attribution of effect
- Small effects

Get a baseline!

# Community-based Interventions



- Lexington, KY. Implemented VERB Summer Scorecard
- Sarasota, FL. VERB Summer Scorecard
- Evaluation: Formative
  - Focus groups on program materials. Interviews at events to assess what worked, what didn't

# Lexington and Sarasota

- Process evaluation
  - Counts of participants, businesses. Interviews with businesses, vendors
  - Monitored VSS use, placement at businesses. Youth board members did field notes at summer events. Hits on Web site pre/post events.

# Lexington and Sarasota

- Outcome evaluation:
  - Cross-sectional design. Surveys in schools in 2005. Linked PA behavior to awareness of VERB and participation in VERB SS.
  - Challenges: Potential biases. Confusion between VERB SS and national VERB. Sample size
  - Can claim associations
  - Sarasota added a control community in 2006

# Lexington and Sarasota

- Outcome evaluation (community level):
  - Document coalition work
  - Reduction of barriers: Bus service accepted VERB SS as tickets in Lexington
  - Community willing to sustain

# Limited \$\$ for Evaluation?

## Build a Case

- Formative
- Process
- Use stories
- Any evidence of community level response
- Link to known effects of national program; similarities
- Rough cost-benefit estimate is compelling
  - Lexington: # of hours of PA /cost

# Limited \$\$ for Evaluation?

- If pressed, argue \$\$ toward evaluation to inform program improvements, given that individual level change is so expensive to measure meaningfully.
- Argue the importance of short and intermediate effects
- If outcome-effects data required, admit the limitations

# Summary

- Large and small evaluations share similar challenges
- Match the evaluation to your needs



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